WHAT IS CLAIMED IS:

1. A hub unit connected to a plurality of communication devices, which controls transmission and reception of data between the devices, comprising:

a first memory unit storing virus pattern information;

a second memory unit temporarily storing data received from any one of the communication devices;

a virus detecting unit that determines whether the data temporarily stored in the second memory unit is infected with a virus or not based on the virus patterns stored in the first memory unit; and

a virus spreading preventing unit that disables transmission of the data outside the hub unit when the detecting unit determines that the data is infected with a virus.

2. A hub unit according to claim 1, further comprising a third memory unit storing transmission addresses of the plurality of the communication devices, wherein when the detecting unit determines that data is infected with a virus, the virus spreading preventing unit registers a transmission address of a communication device that transmitted the data to the hub unit.

3. A hub unit according to claim 1, wherein the virus spreading preventing unit disables transmission of newly received data from a first communication device which transmits data infected with a virus, to the other communication devices, after the detecting unit determines that the data transmitted from the first communication device is infected with a virus.

4. A hub unit according to claim 1, wherein the virus spreading preventing unit disables to reception of new data from a first communication device which transmits data infected with a virus, after the detecting unit determines that the data transmitted from the first communication device is infected with a virus.

5. A hub unit according to claim 1, wherein the

virus spreading preventing unit invalidates data newly received from a first communication device which transmits data infected with a virus, after the detecting unit determines that the data transmitted from the first communication device is infected with a virus.

6. A hub unit according to claim 1, further comprising a display unit for notifying that data is infected with a virus if the detecting unit determines that the data is infected with a virus.

7. A system for preventing the spread of viruses in a communications network, comprising at least a hub unit connected to a plurality of communication devices, which controls transmission and reception of data between the devices and a monitor connected to the hub unit via the network, which monitors communication between the devices, wherein

said monitor comprises:

a first memory unit storing virus pattern information,

a second memory unit temporarily storing data received from any one of the communication devices, and

a virus detecting unit that compares virus patterns stored in the first memory unit with the data temporarily stored in the second memory unit, and determines whether the data is infected with a virus or not, and

said hub unit comprises:

a third memory unit storing transmission addresses of the plurality of the communication devices, and

a virus spreading preventing unit that receives a transmission address of a communication device that transmitted data to the hub unit when the detecting unit determines that the data is infected with a virus, and disables transmission of the data to communication devices other than the communication device that

transmitted the data infected with the virus.

8. A system according to claim 7, wherein said virus spreading preventing unit determines whether or not a transmission address of a communication device, attached to data transmitted from the device, coincides with an address stored in the third memory unit, when the virus detecting unit determines that the data is infected with a virus and, if it determines that there is a coincidence between the two addresses, it disables transmission of the data to a communication device having the same address.

9. A system according to claim 7, wherein the virus spreading preventing unit disables reception of data newly transmitted from the communication device which transmits data infected with a virus, after the detecting unit determines that the data is infected with the virus.

10. A system according to claim 7, wherein the virus spreading preventing unit invalidates data newly received from the communication device which transmits data infected with a virus, after the detecting unit determines that the data is infected with the virus.

11. A system according to claim 7, further comprising a display unit for notifying that data is infected with a virus when the detecting unit determines that the data is infected with the virus.

12. A system according to claim 7, wherein a plurality of hub units are connected in a cascade form, and said virus spreading preventing unit determines whether or not a transmission address of a communication device, attached to data transmitted from the device, coincides with an address stored in the third memory unit in a first hub unit among the plurality of the hub units, when the virus detecting unit determines that the data is infected with a virus, and if it determines that there is no coincidence between the two addresses it successively checks for the coincidence between the transmission

address and addresses stored in the respective third memory units in the successive hub units, and if it determines that there is a coincidence between two addresses it disables transmission of the data to a communication device having the same address.

13. A system according to claim 7, wherein said monitor is a gateway.

14. A system according to claim 7, wherein said monitor is a router.

15. A computer program for a method of preventing the spread of viruses in a communications network wherein a hub unit connected to a plurality of communication devices controls transmission and reception of data between the devices, the program makes the computer execute the steps of:

storing virus pattern information in a first memory unit;

temporarily storing data received from any one of the communication devices in a second memory unit;

determining whether the data temporarily stored in the second memory unit is infected with a virus, or not, based on the virus patterns stored in the first memory unit; and

disabling transmission of the data outside the hub unit when it is determined that the data is infected with a virus in the detecting step.

16. A computer program according to claim 15, the program makes the computer execute the further steps of:

storing transmission addresses of the plurality of the communication devices in a third memory unit, and

registering a transmission address of a communication device that transmitted data to the hub unit when it is determined that the data is infected with a virus in the detecting step.

17. A method of preventing the spread of viruses in a communications network wherein a hub unit connected to

a plurality of communication devices controls transmission and reception of data between the devices, comprising the steps of:

storing virus pattern information in a first memory unit;

temporarily storing data received from any one of the communication devices in a second memory unit;

determining whether the data temporarily stored in the second memory unit is infected with a virus, or not, based on the virus patterns stored in the first memory unit; and

disabling transmission of the data outside the hub unit when it is determined that the data is infected with a virus in the detecting step.

18. A method according to claim 17, comprising the further steps of:

storing transmission addresses of the plurality of the communication devices in a third memory unit, and

registering a transmission address of a communication device that transmitted data to the hub unit when it is determined that the data is infected with a virus in the detecting step.